Traffic Signal System Modernization -- No. 500704

Category	Transportation	Date Last Modified	January 14, 2010
Subcategory	Traffic Improvements	Required Adequate Public Facility	No
Administering Agency	Transportation	Relocation Impact	None.
Planning Area	Countywide	Status	Preliminary Design Stage

EXPENDITURE SCHEDULE ($000)

Cost Element	Total	Thru FY08	Rem. FY08	Total 6 Years	FY09	FY10	FY11	FY12	FY13	FY14	Beyond 6 Years
Planning, Design, and Supervision	5,731	904	1,539	3,288	548	548	548	548	548	548	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	29,289	51	0	25,197	2,652	3,652	5,266	4,980	4,502	4,145	4,041
Construction	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Total	**35,020**	**955**	**1,539**	**28,485**	**3,200**	**4,200**	**5,814**	**5,528**	**5,050**	**4,693**	**4,041**

FUNDING SCHEDULE ($000)

Current Revenue: General	1,625	355	1,270	0	0	0	0	0	0	0	0
Federal Aid	269	0	269	0	0	0	0	0	0	0	0
G.O. Bonds	7,673	600	0	7,073	856	1,353	410	1,117	1,459	1,878	0
Recordation Tax Premium	13,325	0	0	13,325	2,344	2,847	3,081	2,281	1,660	1,112	0
State Aid	12,128	0	0	8,087	0	0	2,323	2,130	1,931	1,703	4,041
Total	**35,020**	**955**	**1,539**	**28,485**	**3,200**	**4,200**	**5,814**	**5,528**	**5,050**	**4,693**	**4,041**

DESCRIPTION

This project provided for Phase I which consisted of requirements development, systems engineering, and testing to modernize the County's traffic signal system. The addition of Phase II entails acquisition and implementation of a state-of-the-art replacement of the current central traffic signal control system. Key elements of the modernization include system central hardware and software and communications system cable plant re-configuration.

Anticipated phases of this project include: Phase I - FY07-08. Phase II - FY09-14 - implementation and quality assurance.

COST CHANGE

FY10 supplemental of $1,000,000. Funding increase is needed to deploy controllers, communication equipment, and other hardware associated with the acceleration of this project resulting from the November 2009 failure of the existing system. Reduced State aid programmed in FY09-10.

JUSTIFICATION

The existing traffic signal control system, though it has been highly reliable, is an aging system reliant on dated technology. Central and field communications devices are obsolete and problematic to maintain. As the technologies employed in the advanced transportation management system (ATMS) have advanced, it has become increasingly difficult to interface with the existing traffic signal control system (COMTRAC). Because of the limited functionality of the COMTRAC, the system is not able to take advantage of the capabilities of the current generation of local intersection controllers. These capabilities provide a greater level of flexibility to manage traffic demands.

The following reports focus on the condition of the current traffic signal control system and document the need to begin the process of system modernization: White Paper on the Status and Future of the Traffic Signal System in Montgomery County, Maryland, March 2001; and Traffic Signal Replacement White Paper, January 2002. The following new reports have been developed in Phase I: Concept of Operations, Revision 1.0 February 2007; Traffic Signal System Modernization (TSSM) Requirements, Draft Revision F, May 2007. These two reports further existing systems analysis and replacement systems functional requirements development. Working in conjunction with the Department of Technology Services (DTS), a comprehensive communications master plan is underway to review the existing communications subsystem and development of state-of-the-art communication systems architecture.

OTHER

Phase I Status (As of August 2007)
Concept of Operations - 100% complete/configuration control
System Requirements - 100% complete/configuration control
Communications Master Plan - 65% complete
Field Inventory - 90% complete
Risk Analyses and Contingency Planning - 5% complete
Cost Estimate and Implementation Plan - 25% complete

FISCAL NOTE

The County's traffic signal system supports over 800 traffic signal locations, of which more than 550 belong to the State but are maintained by the County on a reimbursement basis. The State aid displayed in the funding schedule for FY09-10 has been eliminated due to State fiscal constraints.

APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY07	($000)
First Cost Estimate Current Scope	FY09	34,020
Last FY's Cost Estimate		34,020
Appropriation Request	FY10	3,200
Supplemental Appropriation Request		1,000
Transfer		0
Cumulative Appropriation		5,694
Expenditures / Encumbrances		2,223
Unencumbered Balance		3,471
Partial Closeout Thru	FY07	0
New Partial Closeout	FY08	0
Total Partial Closeout		0

COORDINATION

Traffic Signals Project
Advanced Transportation Management System
Maryland State Highway Administration
Department of Technology Services

MAP